UNIVERSITY AT ALBANY
State University of New York

College of Arts and Sciences
Department of Mathematics and Statistics

Algebra/Topology Seminar

Barbara Giunti

Preserving Minimality Under Chain Complexes and Tameness

Thursday, April 4, 2024
3:00 p.m. in BB-B010

Abstract. In this seminar, I will present the article "Abelian and model structures on tame functors" [arXiv:2301.04079], by Wojciech Chachólski, Claudia Landi, Francesca Tombari, and myself. I will discuss certain circumstances in which the category of tame functors inherits an abelian category structure with minimal resolutions and a model category structure with minimal cofibrant replacements, with some examples realizing these circumstances. Moreover, with some additional hypothesis, I will also show a structure theorem for cofibrant objects. If time permits, I will conclude with a general technique to generate indecomposable objects in the abelian category of functors indexed by finite posets.

Disclaimer: while the original motivation comes from applied topology, this talk will be quite theoretical.